

DATE: **Tuesday, May 15, 2007**
FROM: **Heather Fujioka, PB**
TO: **File**
RE: **Task 5.6 – 2005 Calibration Target Value Preparation**

Calibration Target Values

The new calibration year is 2005. The 2005 person trip control totals were derived from a model run for 2005 done on September 5, 2006. The relative proportions between auto and auxiliary from the 1995 Home Interview Survey (HIS) were used to obtain the 2005 values for auto and auxiliary. And the shares for transit are computed based upon the 2005 On-Board Survey. Table 1 shows the shares that were used in the calibrated model for the Honolulu AA project in the fall/winter of 2006. Table 2 shows the shares that were used to calibrate to the year 2005 for the May 2006 submittal to FTA for entry into preliminary engineering.

Since it was not possible to directly obtain the same trip purposes from the 2005 on-board survey as the 1995 Home-interview survey (and the model definitions), the home-interview survey proportions of transit trips for the JTW-WB, JTW-NB, JAW-WB, JAW-NB, and NWR-NHB were used to proportion the non-home based trip purposes from the on-board survey.

Also the Home-interview survey transit trip proportions for JTW-HBNW, NWR-HBShp, NWR-HBOth were used to proportion out the Home-based shop, and home-based other trip purposes from the on-board survey. And finally, the on-board survey shows that of the trips that were designated as park and ride, a large proportion of those trips were at informal locations. So another variable was added at the bottom of Table 2 that shows that proportion of park and ride trips that were at informal locations.

A final version of the calibration target values is currently being developed that relies upon time period and work status of the trip maker to more accurately determine the appropriate placement of the trip into model defined categories.

Table 1. Observed Shares from Winter 2006 Calibration (1995 Calibration Year)

Purpose >	Journey To/From Work (JTW)				Journey At Work (JAW)		Non-Work Related (NWR)				
Share \	HBW	HBNW	WB	NB	WB	NB	HBK12	HBCol	HBShp	HBOth	NHB
Auto-Ownership/Level 1 Mode											
S0Hwy	0.14	0.14					0.05	-	0.20	0.15	
S0Trn	0.65	0.42					0.20	0.73	0.37	0.38	
S0Aux	0.22	0.45					0.75	0.27	0.43	0.47	
S1Hwy	0.67	0.91	0.86	0.93	0.72	0.81	0.53	0.59	0.84	0.81	0.85
S1Trn	0.21	0.05	0.06	0.03	0.03	-	0.11	0.30	0.06	0.06	0.06
S1Aux	0.12	0.04	0.07	0.04	0.26	0.19	0.36	0.10	0.10	0.13	0.10
S2Hwy	0.89	0.97					0.73	0.75	0.96	0.90	
S2Trn	0.08	0.01					0.10	0.16	0.02	0.03	
S2Aux	0.03	0.02					0.17	0.09	0.02	0.07	
Level 2- Highway Shared Ride											
S1o1	0.66	0.39	0.74	0.37	0.74	0.58	0.01	0.64	0.31	0.33	0.25
S1sr	0.34	0.61	0.26	0.64	0.26	0.42	0.99	0.36	0.70	0.67	0.75
S2o1	0.81	0.42	--	--	--	--	0.06	0.82	0.38	0.34	--
S2sr	0.19	0.58	--	--	--	--	0.94	0.19	0.62	0.67	--
Level 3- Highway Shared Ride Occupancy											
Socc2	0.81	0.62	0.79	0.68	0.72	0.80	0.38	0.77	0.58	0.55	0.52
Socc3	0.19	0.38	0.21	0.32	0.28	0.20	0.62	0.23	0.43	0.45	0.48
Level 2- Transit Access											
S0wacc	0.99	0.99	--	--	--	--	0.93	0.99	0.99	0.99	--
S0dacc	0.01	0.01	--	--	--	--	0.07	0.01	0.01	0.01	--
S1wacc	0.96	0.95	0.82	0.99	0.92	0.99	1.00	0.99	0.98	0.98	0.97
S1dacc	0.05	0.05	0.18	0.01	0.08	0.01	0.00	0.01	0.02	0.02	0.03
S2wacc	0.85	0.99	--	--	--	--	0.85	0.96	0.91	0.97	--
S2dacc	0.15	0.01	--	--	--	--	0.16	0.04	0.10	0.03	--
Level 3 Mode – Drive Access											
PNR	0.34	0.30	0.19	0.19	0.19	0.19	0.30	0.30	0.30	0.30	0.19
KNR	0.66	0.70	0.81	0.81	0.81	0.81	0.70	0.70	0.70	0.70	0.81
Level 2- Auxiliary Path											
Sauxw	0.79	0.92	0.94	0.99	0.96	0.99	0.93	0.63	0.92	0.91	0.95
Sauxb	0.21	0.08	0.06	0.01	0.04	0.01	0.07	0.37	0.08	0.09	0.05

Notes: 1) Purposes not based at home are not stratified by vehicle ownership—S1 shares apply across all vehicle-ownership strata. 2)

--“ indicates cell not applicable.

Tables 1 and 2's Key

S0, S1, S2 = Shares for Households with 0 cars, 1 car, and 2 car respectively

CBD = Attraction End of Trip is in Central Business District

OTH = Attraction End of Trip is in Core Commercial and Core Residential area.

ELS = Attraction End of Trip is in Urban, Suburban, or Rural area.

HWY = Mode is Auto in Level 1 of the Mode Choice Model.

TRN = Mode is Transit in Level 1 of the Mode Choice Model.

AUX = Mode is Non-motorized in Level 1 of the Mode choice Model.

O1 = Mode is Drive alone in Level 2 of the Mode Choice Model.

SR = Mode is Shared Ride in Level 2 of the Mode Choice Model.

OCC2 = Mode is Shared Ride 2-Persons in Level 3 of the Mode Choice Model.

OCC3 = Mode is Shared Ride 3 or more persons in Level 3 of the Mode Choice Model

WACC = Mode is Walk Access to Transit in Level 2 of the Mode Choice Model.

DACC = Mode is Drive Access to Transit in Level 2 of the Mode Choice Model.

NGDWY = Mode is walk access to Local Bus in Level 3 of the Mode Choice Model.

GDWY = Mode is walk access to guideway in Level 3 of the Mode Choice Model.

PREM = Mode is walk access to premium bus in Level 3 of the Mode Choice Model.

PNR = Mode is Park and Ride in Level 3 of the Mode Choice Model.

KNR = Mode is Kiss and Ride in Level 3 of the Mode Choice Model.

AUXW = Mode is Walk in Level 2 of the Mode Choice Model.

AUXB = Mode is Bike in Level 2 of the Mode Choice Model.

Table 2. Observed Shares for 2005 Calibration Year

Purpose >	Journey To/From Work (JTW)				Journey At Work (JAW)		Non-Work Related (NWR)					
	Share V	HBW	HBNW	WB	NB	WB	NB	HBK12	HBCol	HBShp	HBOth	NHB
Auto-Ownership/Level 1 Mode												
S0Hwy	0.138	0.268					0.125	0.010	0.220	0.163		
S0Trn	0.648	0.282					0.225	0.850	0.294	0.327		
S0Aux	0.215	0.450					0.650	0.140	0.486	0.509		
S1Hwy	0.725	0.932	0.871	0.941	0.720	0.810	0.553	0.707	0.864	0.836	0.867	
S1Trn	0.151	0.025	0.058	0.018	0.020	-	0.075	0.169	0.037	0.034	0.031	
S1Aux	0.124	0.043	0.071	0.040	0.260	0.190	0.372	0.124	0.099	0.130	0.102	
S2Hwy	0.899	0.975					0.765	0.750	0.969	0.912		
S2Trn	0.068	0.009					0.057	0.160	0.012	0.017		
S2Aux	0.033	0.017					0.178	0.090	0.019	0.071		
Level 2- Highway Shared Ride												
S1o1	0.659	0.387	0.745	0.367	0.736	0.579	0.007	0.638	0.305	0.327	0.250	
S1sr	0.341	0.613	0.255	0.633	0.264	0.421	0.993	0.362	0.695	0.673	0.750	
S2o1	0.806	0.420	--	--	--	--	0.061	0.815	0.382	0.335	--	
S2sr	0.194	0.580	--	--	--	--	0.939	0.185	0.618	0.665	--	
Level 3- Highway Shared Ride Occupancy												
Socc2	0.81	0.62	0.79	0.68	0.72	0.8	0.38	0.77	0.58	0.55	0.52	
Socc3	0.19	0.38	0.21	0.32	0.28	0.2	0.62	0.23	0.43	0.45	0.48	
Level 2- Transit Access												
S0wacc	0.979	0.965	--	--	--	--	0.972	0.991	0.965	0.965	--	
S0dacc	0.021	0.035	--	--	--	--	0.028	0.009	0.035	0.035	--	
S1wacc	0.919	0.895	0.826	0.99	0.869	0.99	0.935	0.919	0.952	0.964	0.851	
S1dacc	0.081	0.105	0.174	0.01	0.131	0.01	0.065	0.081	0.048	0.036	0.149	
S2wacc	0.786	0.996	--	--	--	--	0.907	0.899	0.758	0.919	--	
S2dacc	0.214	0.004	--	--	--	--	0.093	0.101	0.242	0.081	--	
Level 3 – Transit WALK/DRIVE Path												
Sngdwy	0.898	0.977	0.977	1.000	0.983	1.000	0.972	0.959	0.963	1.000	1.000	
Sprem	0.102	0.023	0.023	-	0.017	-	0.028	0.041	0.037	0.000	-	
Sgdwy	0	0	0	0	0	0	0	0	0	0	0	
Level 3 Mode – Drive Access												
PNR	0.218	0.15	0.01	0.01	0.152	0.01	0.213	0.277	0.01	0.01	0.01	
KNR	0.782	0.85	0.99	0.99	0.848	0.99	0.787	0.723	0.99	0.99	0.99	
Level 3 Mode – Transit DRIVE Path by Auto-Ownership												
S1Pnr	0.337	0.2	0.01	0.01	0.152	0.01	0.138	0.000	0.01	0.01	0.01	
S1Knr	0.663	0.8	0.99	0.99	0.848	0.99	0.862	1.000	0.99	0.99	0.99	
S2Pnr	0.184	0.1	--	--	--	--	0.246	0.290	0.01	0.01	--	
S2Knr	0.816	0.9	--	--	--	--	0.754	0.710	0.99	0.99	--	
Level 2- Auxiliary Path												
Sauxw	0.791	0.850	0.936	0.990	0.962	0.99	0.900	0.540	0.922	0.909	0.952	
Sauxb	0.209	0.150	0.064	0.010	0.038	0.01	0.100	0.460	0.078	0.091	0.048	
Informal Park and Ride												
Sinfl	0.9	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	